

L Number	Hits	Search Text	DB	Time stamp
1	3232	bonding same capillary	USPAT; US-PGPUB	2003/02/14 15:52
2	1329	(bonding same capillary) and semiconductor	USPAT; US-PGPUB	2003/02/14 15:52
3	795	((bonding same capillary) and semiconductor) and (conductive or conductor)	USPAT; US-PGPUB	2003/02/14 15:53
4	643	((((bonding same capillary) and semiconductor) and (conductive or conductor)) and (bonding with wire)	USPAT; US-PGPUB	2003/02/14 15:53
5	473	((((bonding same capillary) and semiconductor) and (conductive or conductor)) and (bonding with wire)) and ball	USPAT; US-PGPUB	2003/02/14 15:53
6	384	(((((bonding same capillary) and semiconductor) and (conductive or conductor)) and (bonding with wire)) and ball) and @ad<=20010322	USPAT; US-PGPUB	2003/02/14 15:01
7	2648	bonding same capillary	EPO; JPO; DERWENT; IBM_TDB	2003/02/14 15:52
8	1013	(bonding same capillary) and semiconductor	EPO; JPO; DERWENT; IBM_TDB	2003/02/14 15:52
9	66	((bonding same capillary) and semiconductor) and (conductive or conductor)	EPO; JPO; DERWENT; IBM_TDB	2003/02/14 15:53
10	58	((((bonding same capillary) and semiconductor) and (conductive or conductor)) and (bonding with wire)	EPO; JPO; DERWENT; IBM_TDB	2003/02/14 15:53
11	27	(((((bonding same capillary) and semiconductor) and (conductive or conductor)) and (bonding with wire)) and ball	EPO; JPO; DERWENT; IBM_TDB	2003/02/14 15:54

DERWENT-ACC-NO: 1996-381392
DERWENT-WEEK: 199638
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TITLE: Capillary for wire bonding appts. - has curve
surface in concave shape
which provided at end part of bump formed on electrode pad
of integrated
circuit chip

PATENT-ASSIGNEE: MATSUSHITA DENKI SANGYO KK[MATU]

PRIORITY-DATA: 1994JP-0327955 (December 28, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
PAGES	MAIN-IPC	
JP 08186117 A	July 16, 1996	N/A
009	H01L 021/321	

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
JP 08186117A	N/A	1994JP-0327955
December 28, 1994		

INT-CL (IPC): H01L021/321; H01L021/60

ABSTRACTED-PUB-NO: JP 08186117A

BASIC-ABSTRACT: The capillary forms a bump (27,27') on an
electrode pad (13) of
an integrated circuit chip (6). It presses the end part of
a ball-shape metal
wire on the electrode pad. A press mechanism presses a
ball-like end part of
the bump in the electrode pad.

The metal wire provided at the press mechanism is supplied
by a conductive
outlet hole. A curve surface (24) in a concave shape is
provided at the end
part of the bump on the electrode pad.

ADVANTAGE - Forms curve surface easily in end part of bump

through ball bonding
and plating method. Provides flexible and practical curve
surface. Improves
electric conduction characteristic of semiconductor device.

Provides capillary
that increases bonding strength and obtains reliable
electric connection of
bump and terminal electrode of circuit substrate.

CHOSEN-DRAWING: Dwg.1/14

TITLE-TERMS:

CAPILLARY WIRE BOND APPARATUS CURVE SURFACE CONCAVE SHAPE
END PART BUMP FORMING
ELECTRODE PAD INTEGRATE CIRCUIT CHIP

DERWENT-CLASS: U11

EPI-CODES: U11-D03B1; U11-E01A;

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N1996-321594